HYDRODYNAMICS CONTROL METHOD AND APPARATUS ABSTRACT

A method and apparatus for establishing a plug flow of fluid through a process vessel utilizing a permeable barrier placed in the flow path of the fluid being processed within the vessel causing the fluid to spread out over the surface of the leading edge of the permeable barrier and can include a means for adjusting the permeability of the barrier in discrete areas of the barrier to compensate for variations in feed rate, density and viscosity of the fluid being processed and further the permeable barrier may be of a louvered shutter type construction with the louvers being adjustable from wide open to closed and if desired can include a mechanism on the exterior of the vessel for adjusting the internal louvers.